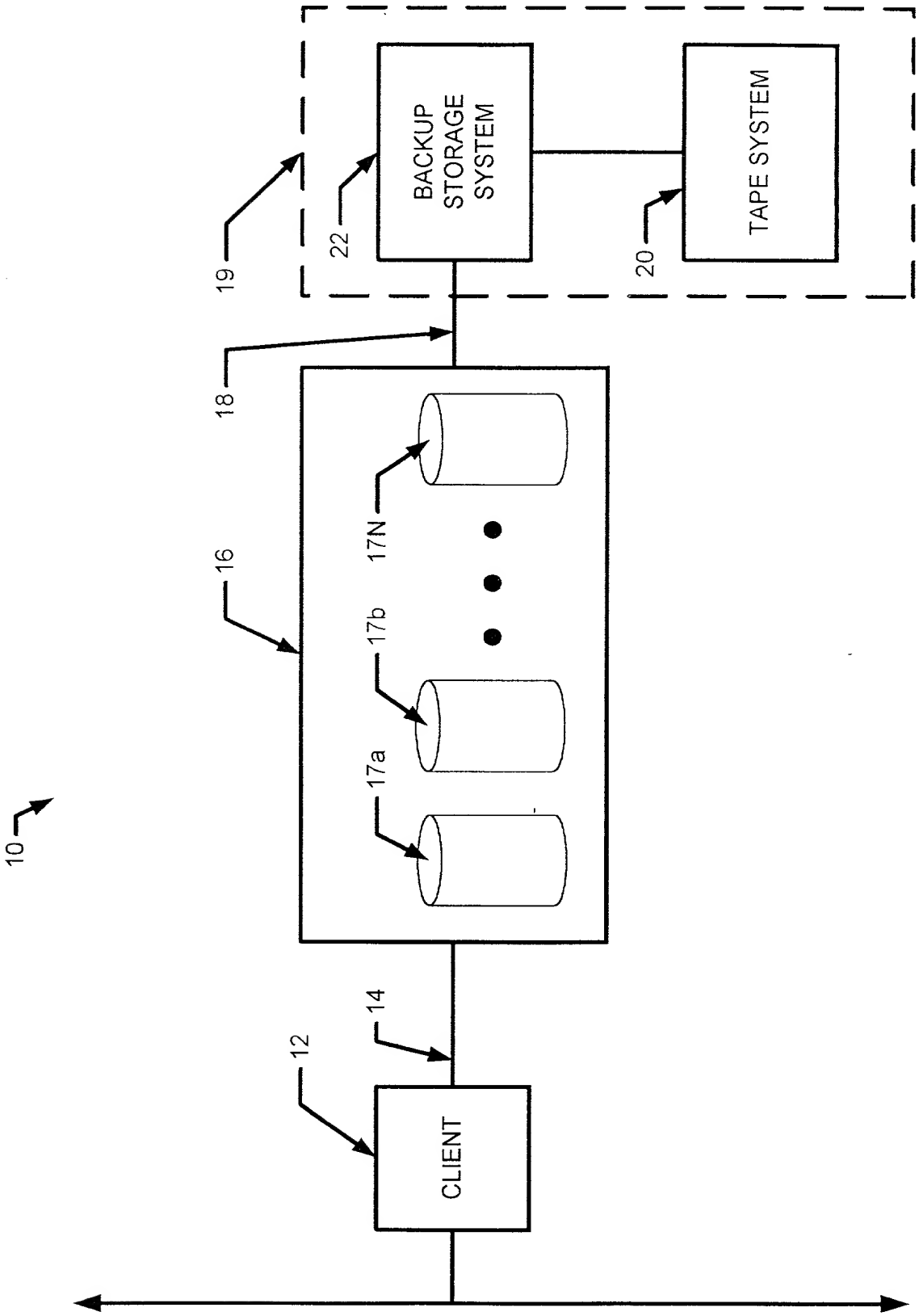
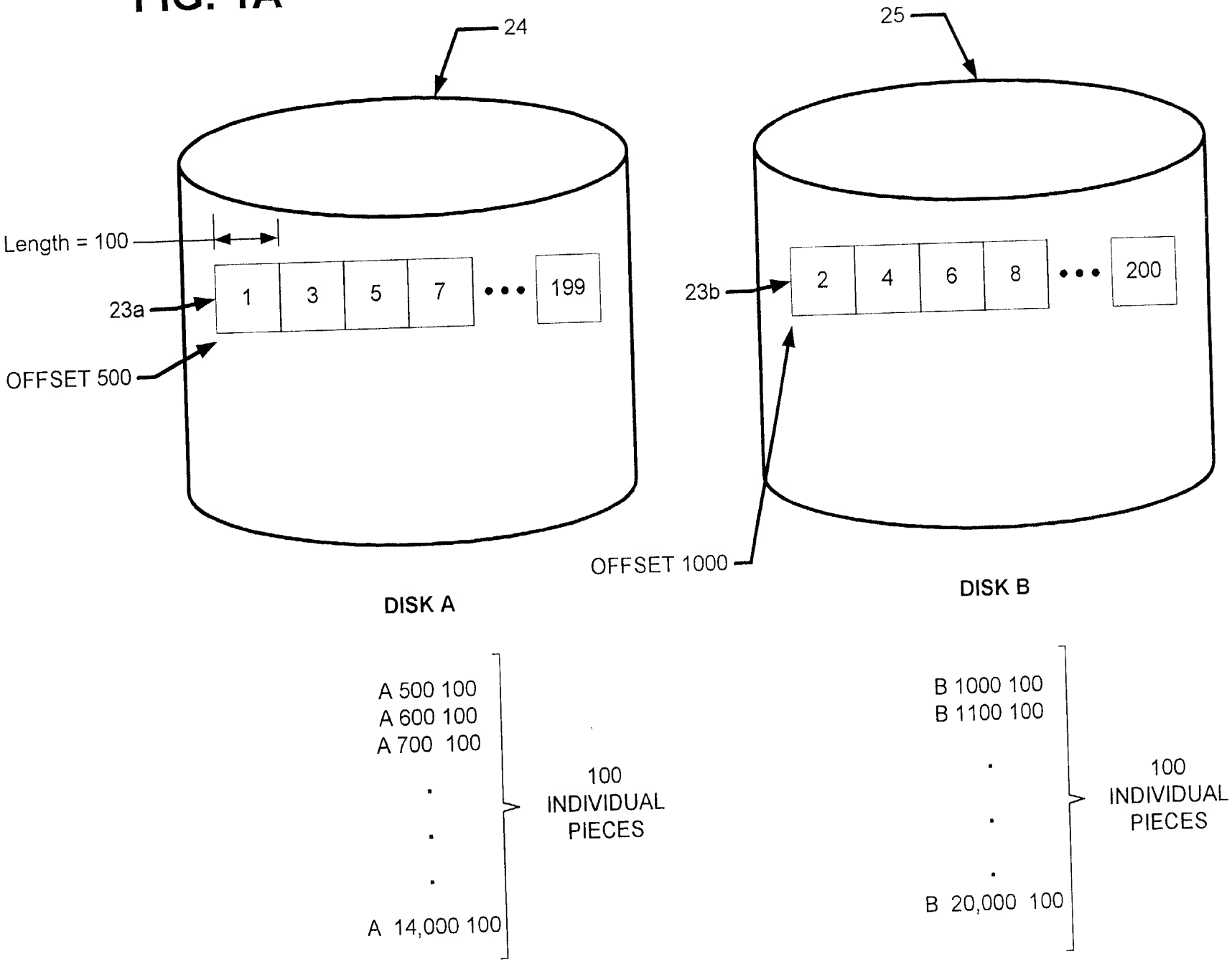

10
19
22
BACKUP STORAGE SYSTEM
20
TAPE SYSTEM
18
16
17N
17b
17a
14
12
CLIENT

FIG. 1

FIG. 1A


24
25
Length = 100
23a
1
3
5
7
199
OFFSET 500
23b
2
4
6
8
200
OFFSET 1000
DISK A
DISK B
A 500 100
A 600 100
A 700 100
A 14,000 100
100 INDIVIDUAL PIECES
B 1000 100
B 1100 100
B 20,000 100
100 INDIVIDUAL PIECES

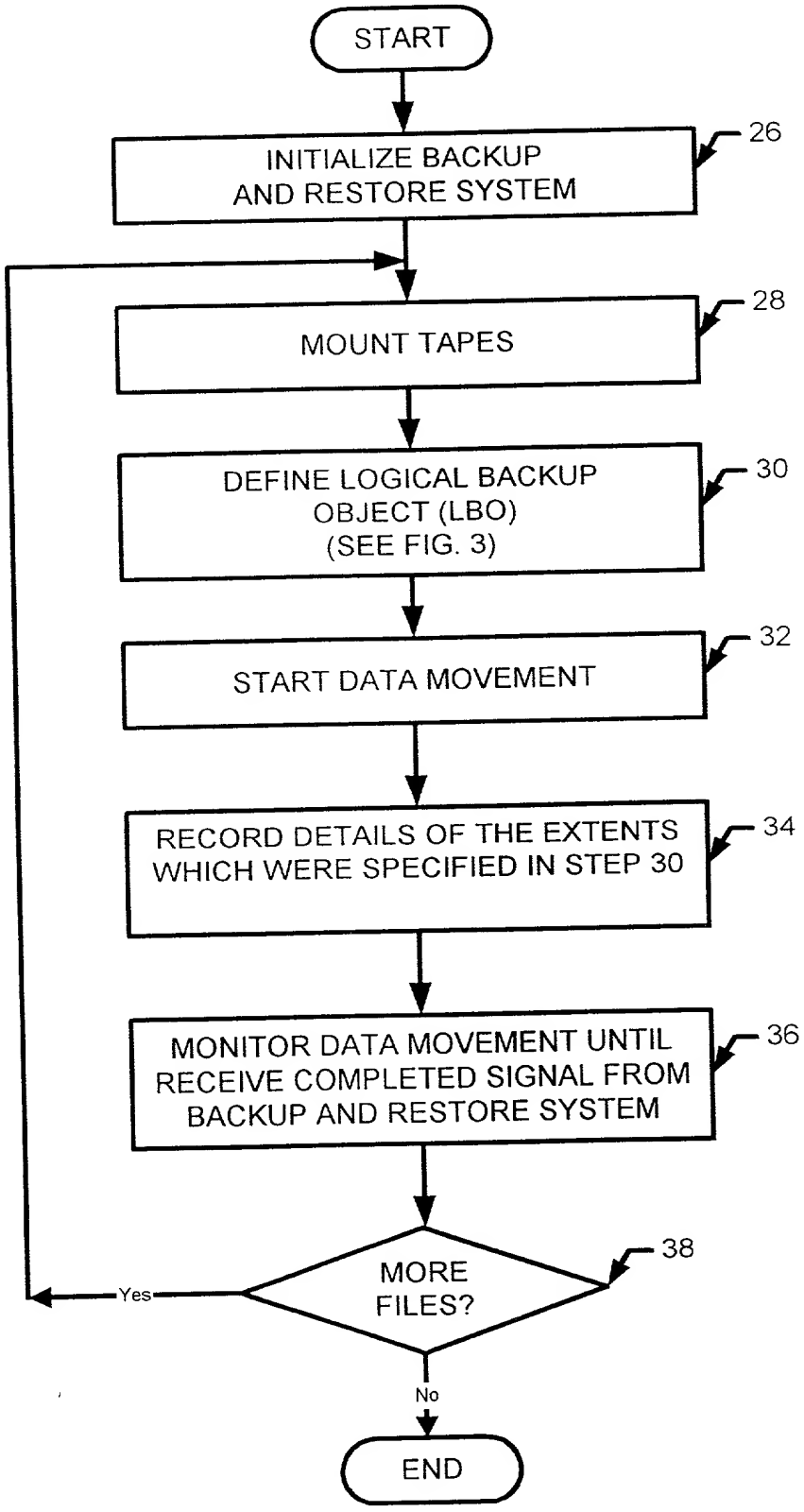

START
INITIALIZE BACKUP AND RESTORE SYSTEM
26
MOUNT TAPES
28
DEFINE LOGICAL BACKUP OBJECT (LBO) (SEE FIG. 3)
30
START DATA MOVEMENT
32
RECORD DETAILS OF THE EXTENTS WHICH WERE SPECIFIED IN STEP 30
34
MONITOR DATA MOVEMENT UNTIL RECEIVE COMPLETED SIGNAL FROM BACKUP AND RESTORE SYSTEM
36
MORE FILES?
38
Yes
No
END

FIG. 2

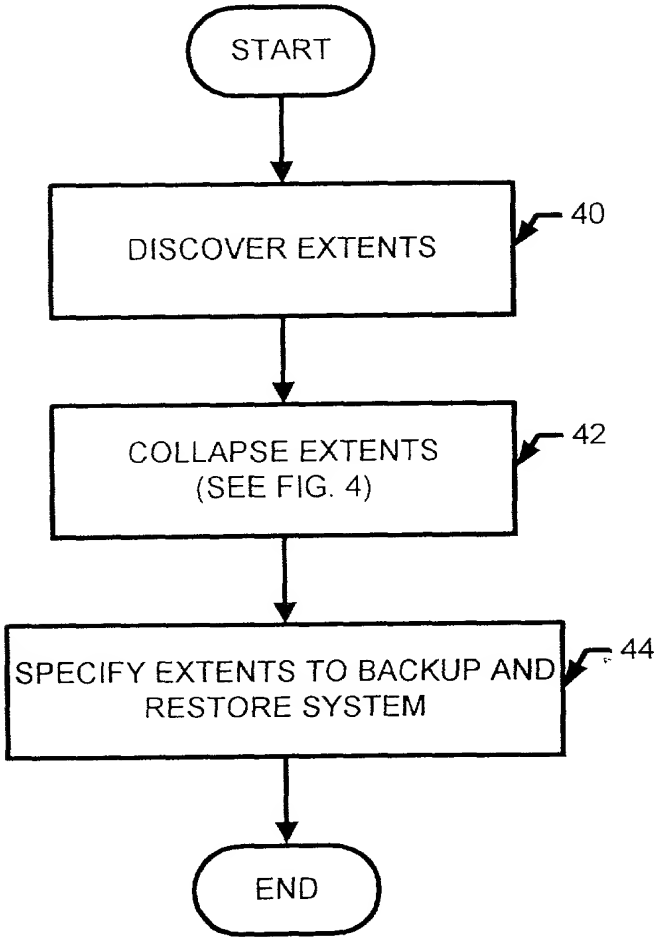

START
DISCOVER EXTENTS
40
COLLAPSE EXTENTS
(SEE FIG. 4)
42
SPECIFY EXTENTS TO BACKUP AND
RESTORE SYSTEM
44
END

FIG. 3

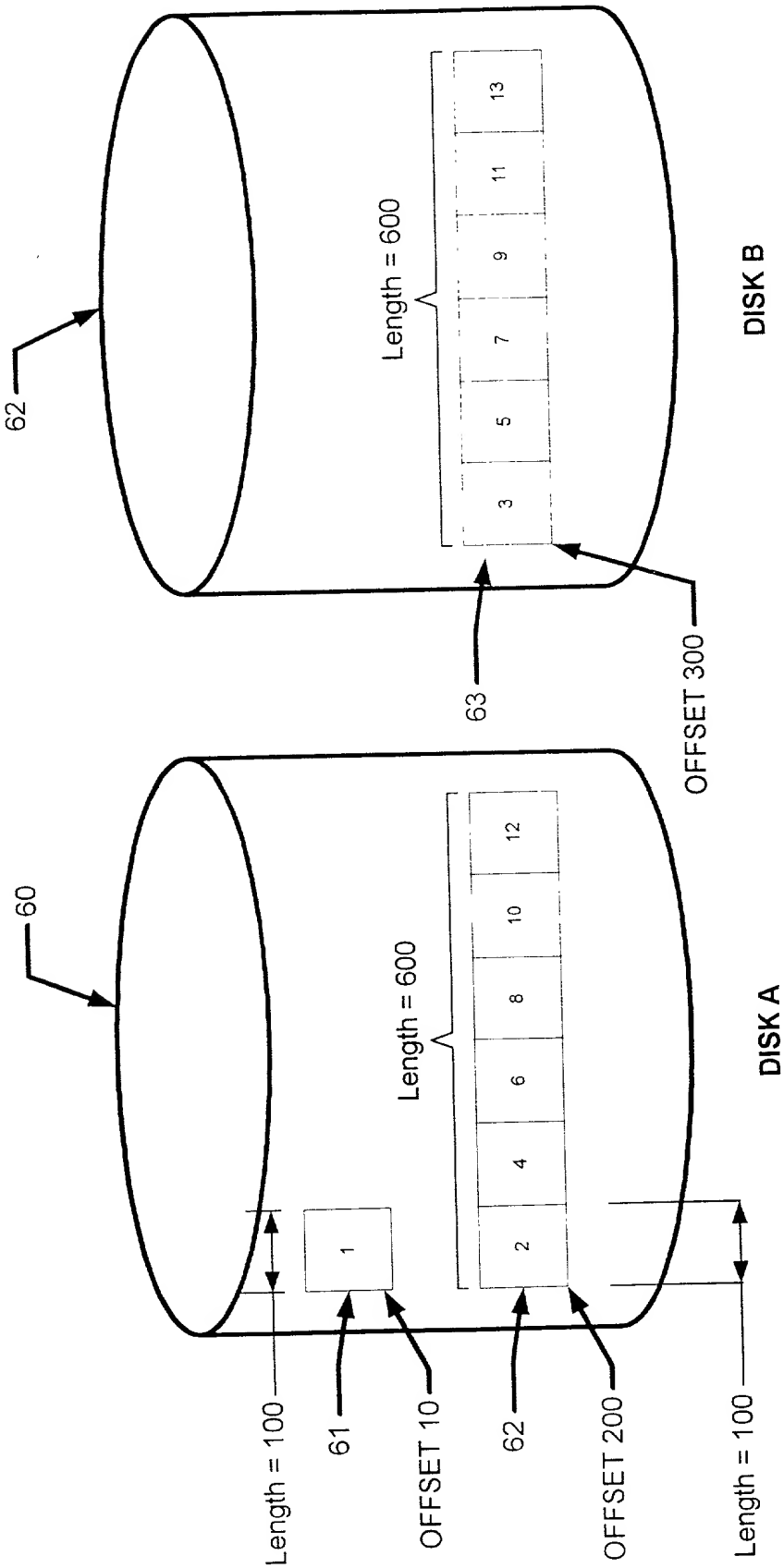

60
DISK A
Length = 600
2
4
6
8
10
12
1
Length = 100
61
OFFSET 10
62
OFFSET 200
Length = 100
62
DISK B
Length = 600
3
5
7
9
11
13
63
OFFSET 300

FIG. 4

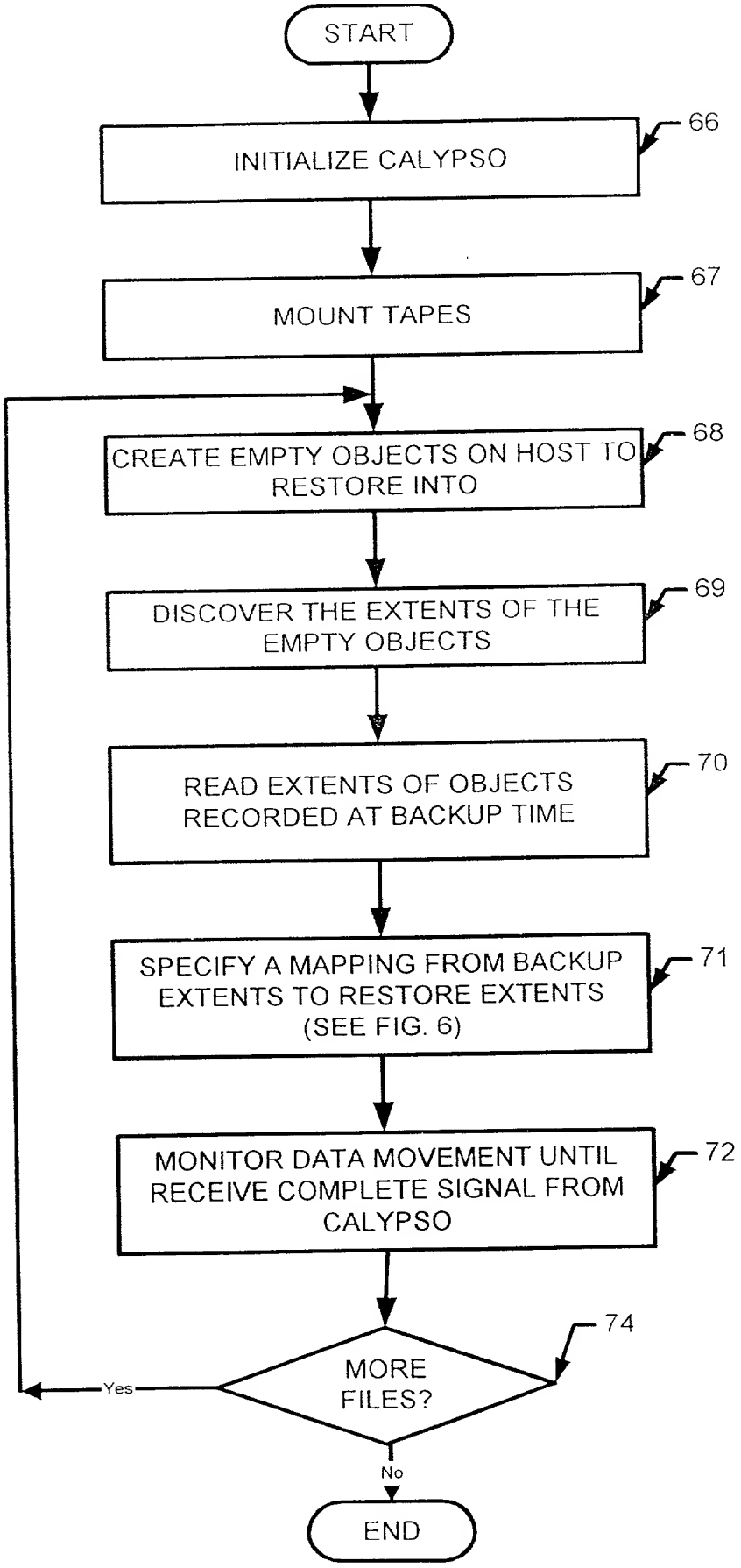

START
INITIALIZE CALYPSO
66
MOUNT TAPES
67
CREATE EMPTY OBJECTS ON HOST TO RESTORE INTO
68
DISCOVER THE EXTENTS OF THE EMPTY OBJECTS
69
READ EXTENTS OF OBJECTS RECORDED AT BACKUP TIME
70
SPECIFY A MAPPING FROM BACKUP EXTENTS TO RESTORE EXTENTS (SEE FIG. 6)
71
MONITOR DATA MOVEMENT UNTIL RECEIVE COMPLETE SIGNAL FROM CALYPSO
72
MORE FILES?
74
Yes
No
END

FIG. 5

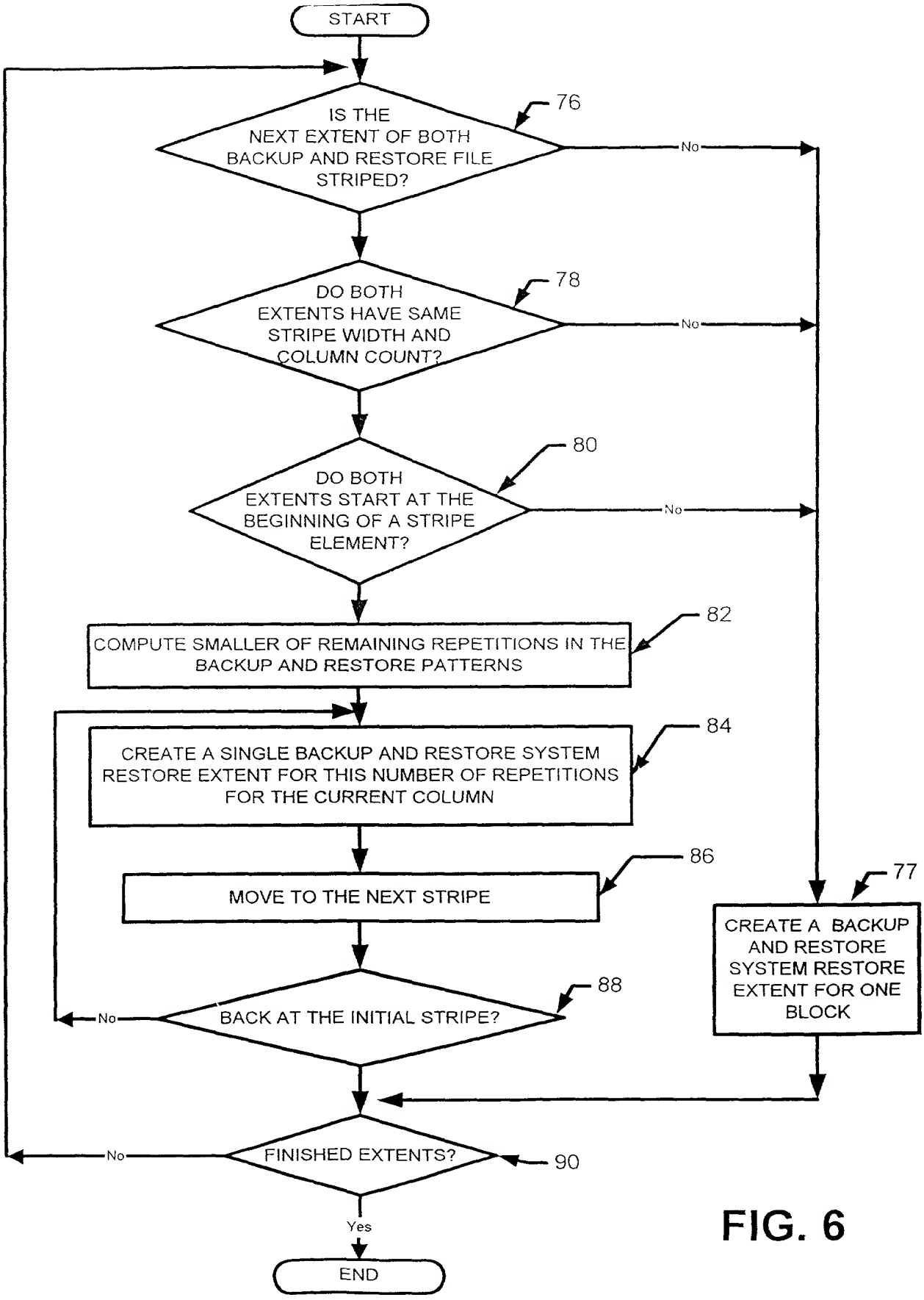
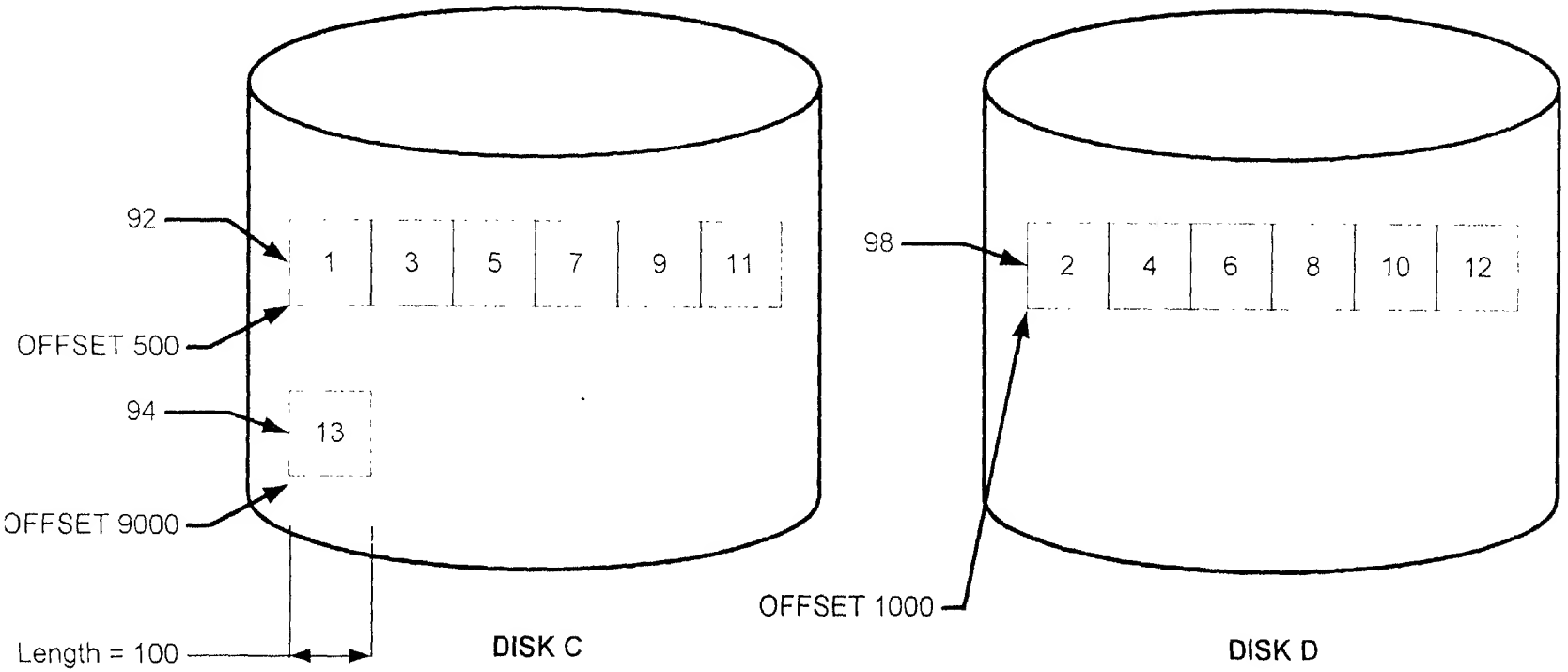

START
IS THE NEXT EXTENT OF BOTH BACKUP AND RESTORE FILE STRIPED?
76
No
DO BOTH EXTENTS HAVE SAME STRIPE WIDTH AND COLUMN COUNT?
78
No
DO BOTH EXTENTS START AT THE BEGINNING OF A STRIPE ELEMENT?
80
No
COMPUTE SMALLER OF REMAINING REPETITIONS IN THE BACKUP AND RESTORE PATTERNS
82
CREATE A SINGLE BACKUP AND RESTORE SYSTEM RESTORE EXTENT FOR THIS NUMBER OF REPETITIONS FOR THE CURRENT COLUMN
84
MOVE TO THE NEXT STRIPE
86
CREATE A BACKUP AND RESTORE SYSTEM RESTORE EXTENT FOR ONE BLOCK
77
BACK AT THE INITIAL STRIPE?
88
No
FINISHED EXTENTS?
90
No
Yes
END

FIG. 6

FIG. 7


92
1
3
5
7
9
11
OFFSET 500
94
13
OFFSET 9000
Length = 100
DISK C
98
2
4
6
8
10
12
OFFSET 1000
DISK D